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PATENT & TRADEMARK OFFICE

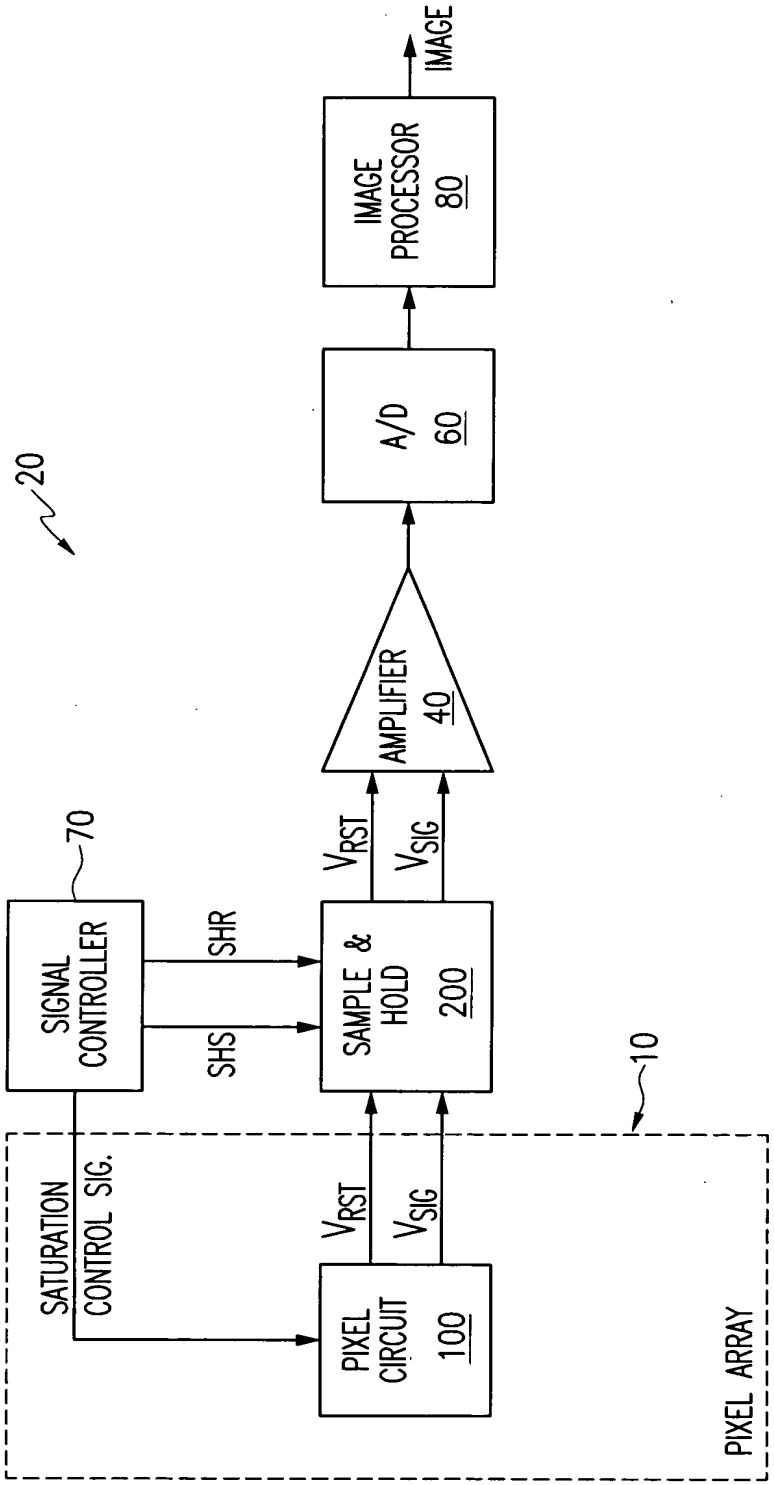

FIG. 1

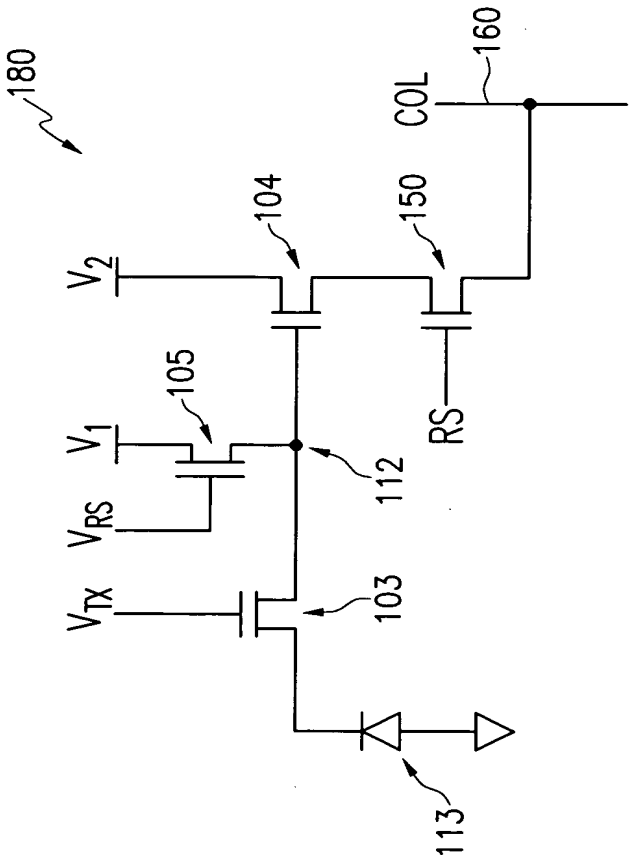

FIG. 2A

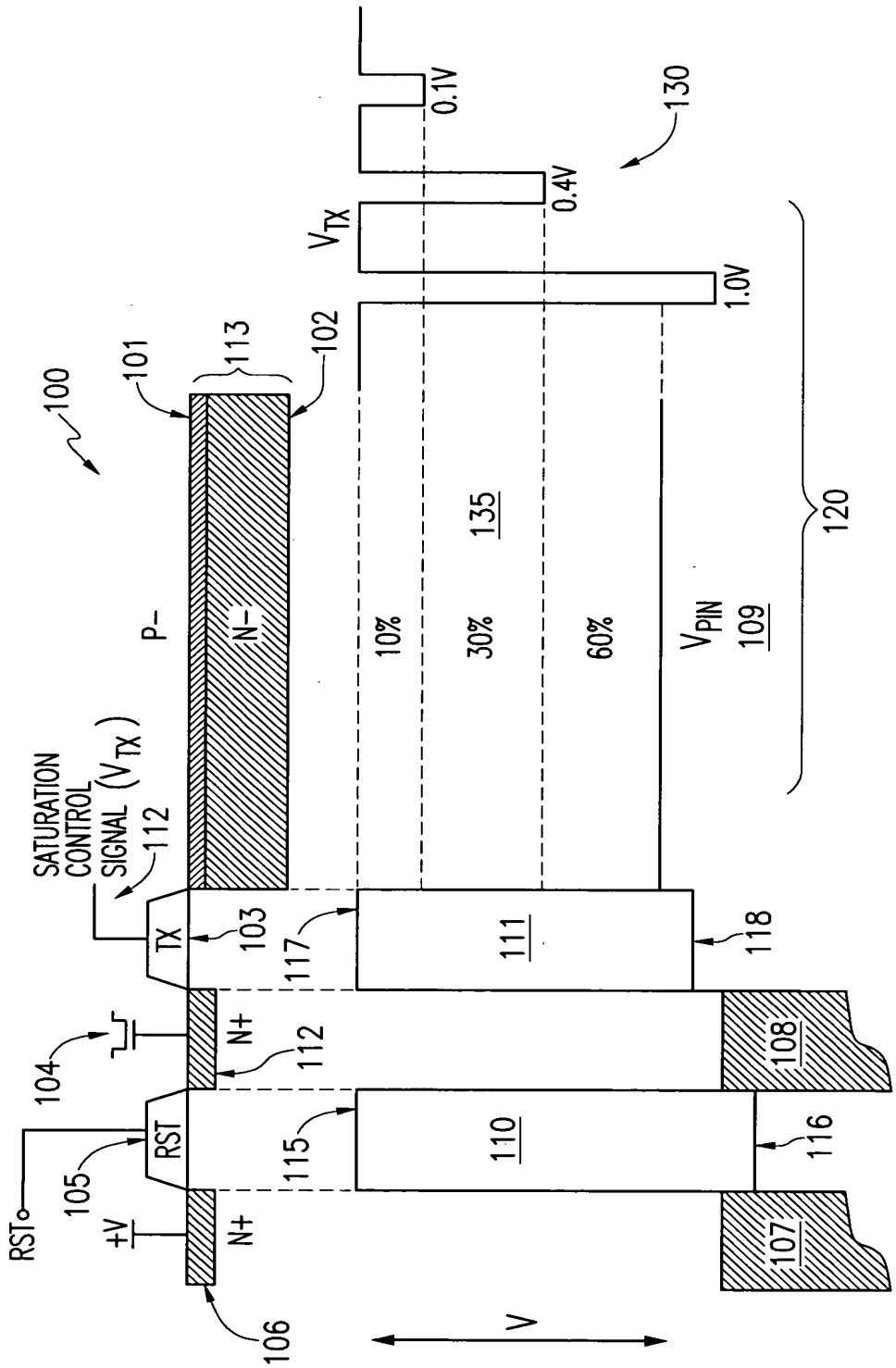
0.1V
130
0.4V
V_{TX}
1.0V
100
101
113
102
120
P-
N-
10%
30%
135
60%
V_{PIN}
109
SATURATION CONTROL SIGNAL (V_{TX})
112
TX
103
117
111
118
104
N+
112
108
RST
105
115
110
116
RST
+V
N+
107
106
V

FIG. 2B

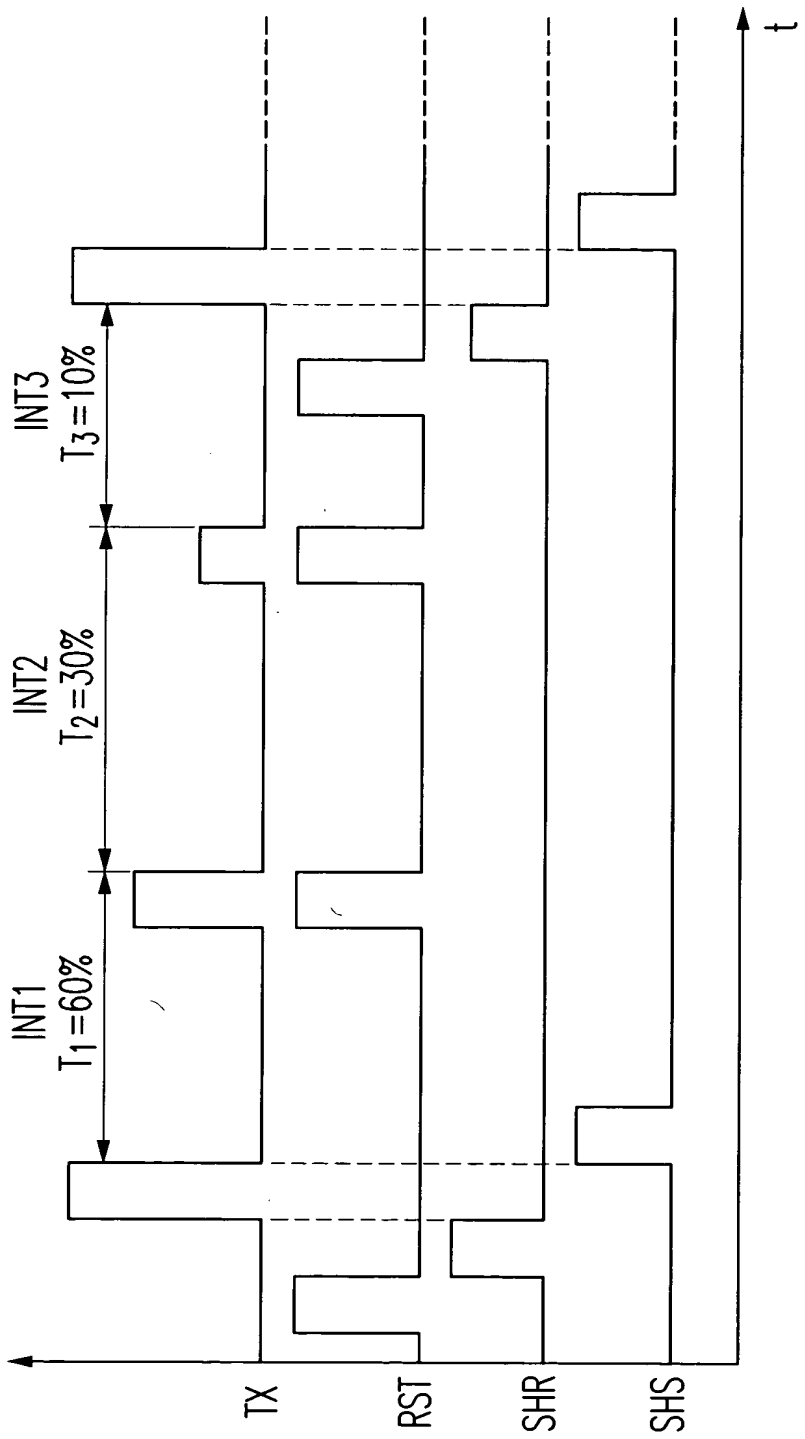

FIG. 3

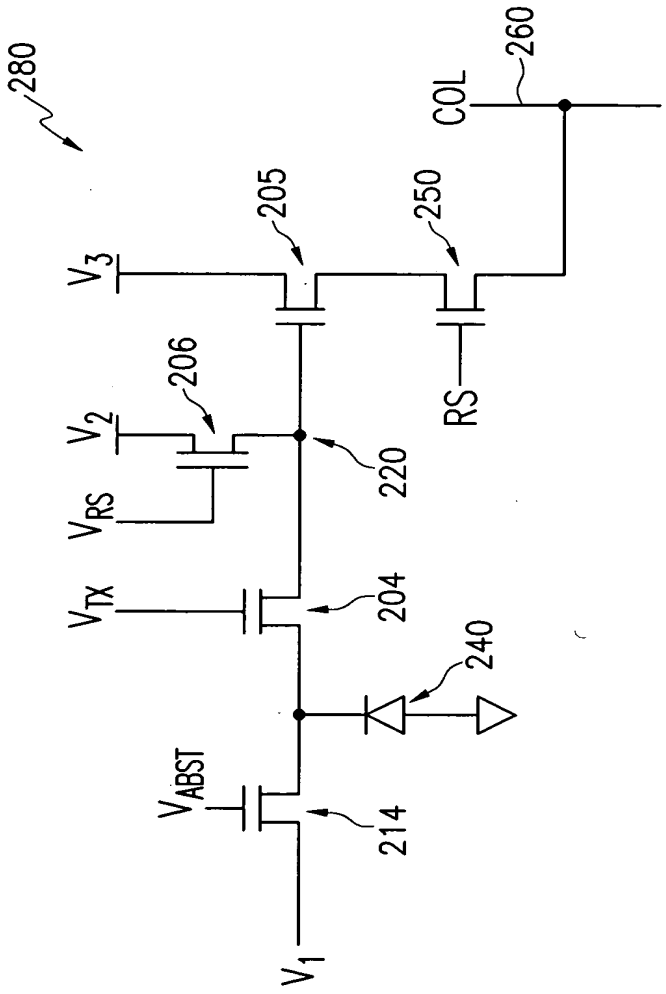

FIG. 4A

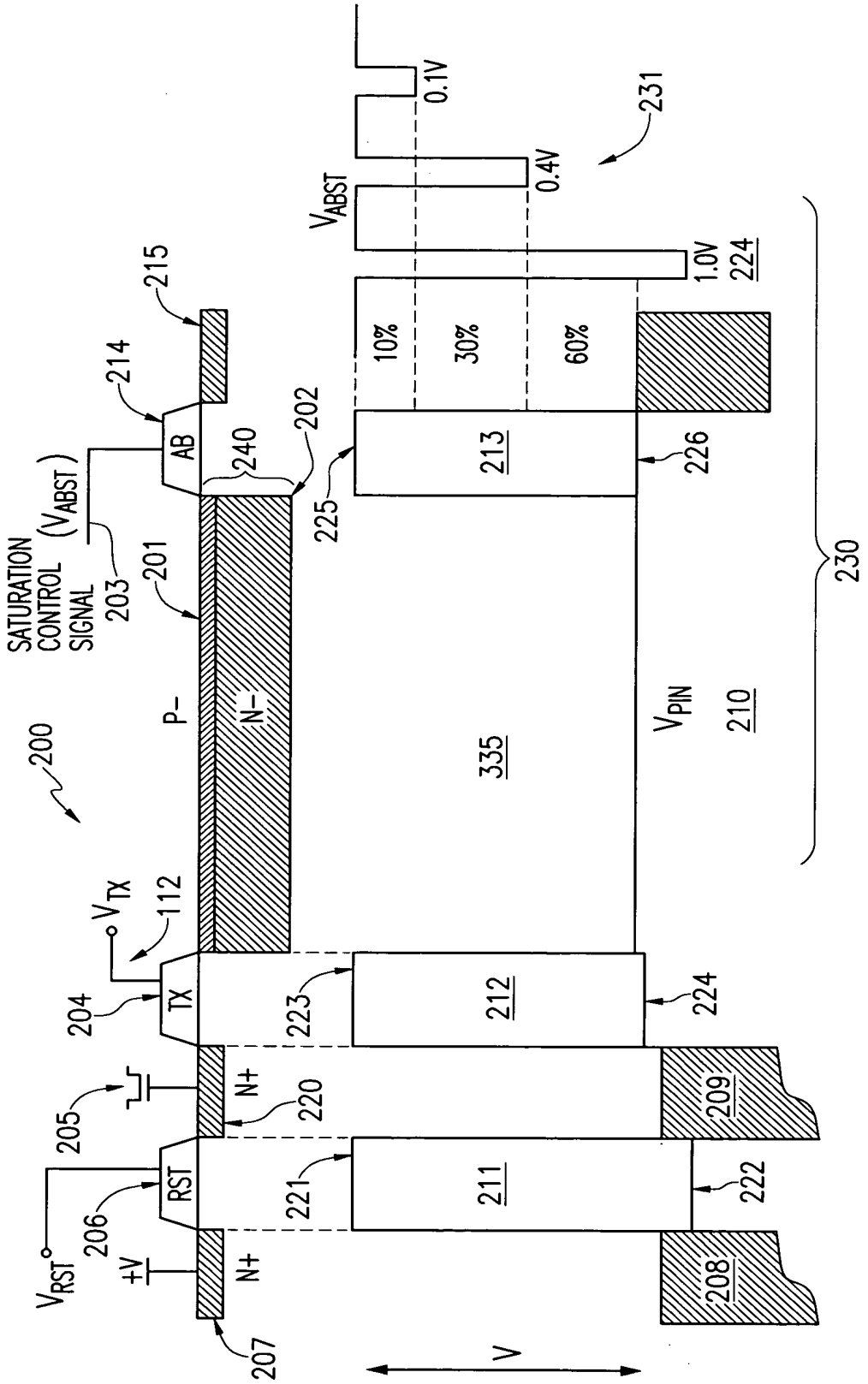
0.1V
231
V_{ABST}
0.4V
1.0V
224
215
214
10%
30%
60%
AB
240
202
213
226
225
SATURATION CONTROL SIGNAL (V_{ABST})
203
201
230
200
P-
N-
335
V_{PIN}
210
V_{TX}
112
204
TX
223
212
224
205
N+
220
209
RST
221
211
222
206
V_{RST}
+V
N+
208
207
V

FIG. 4B

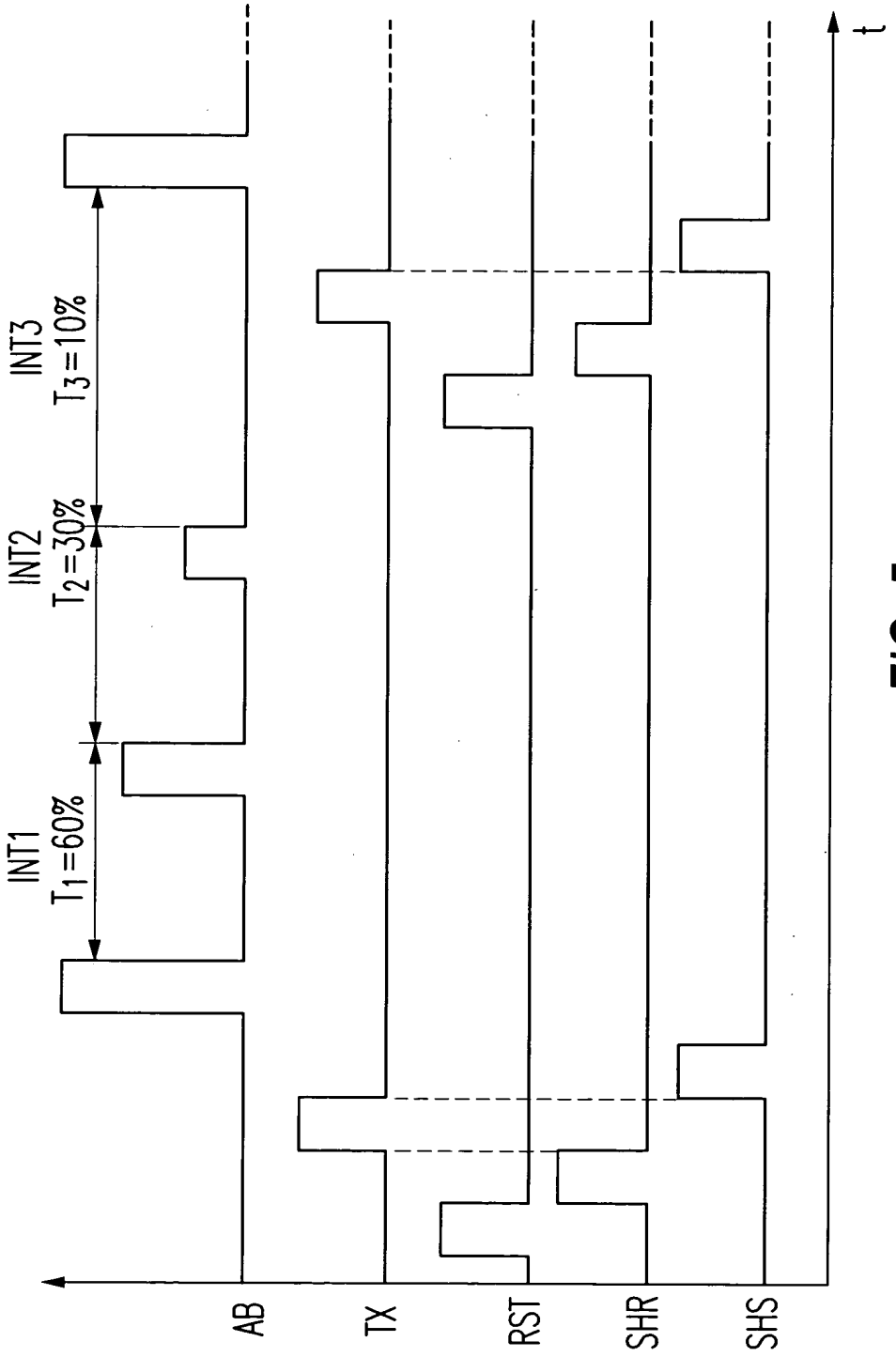

FIG. 5

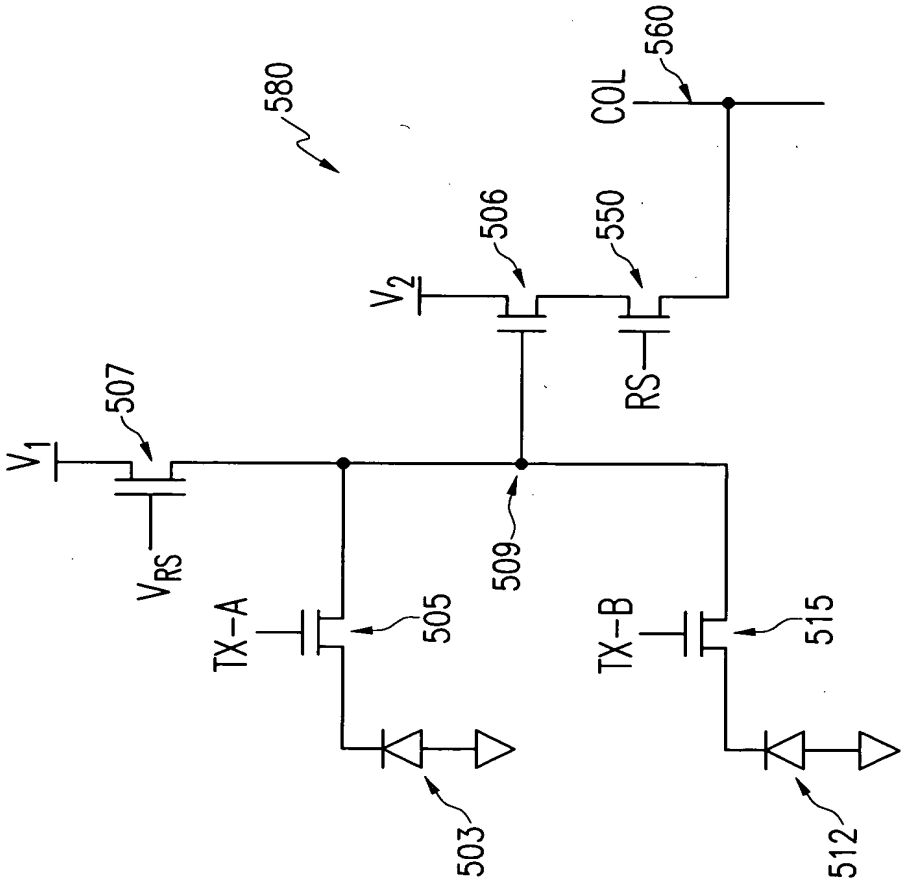

FIG. 6A

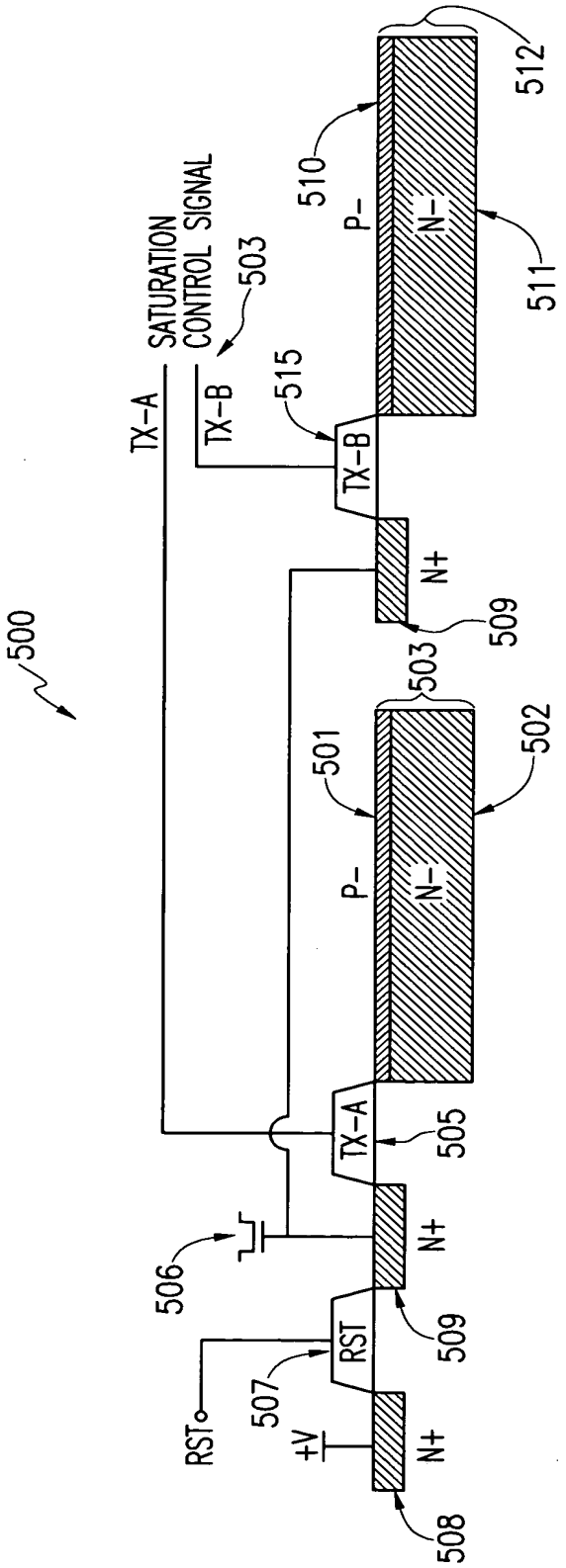
500
SATURATION CONTROL SIGNAL
503
TX-A
TX-B
515
TX-B
510
512
P-
N-
511
N+
509
503
501
502
P-
N-
TX-A
505
506
N+
509
RST
507
RST
+V
N+
508

FIG. 6B

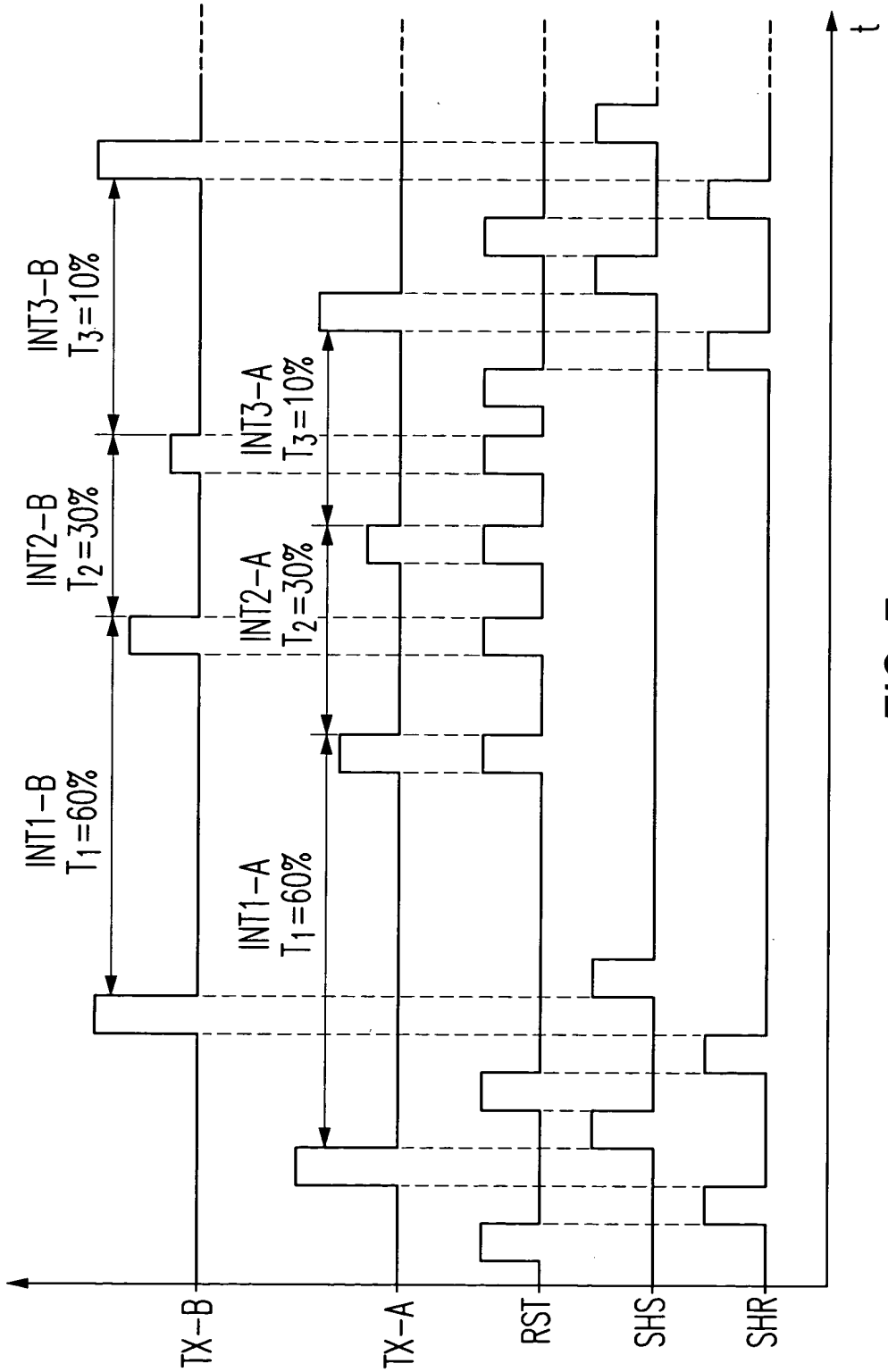
INT3-B
T3=10%
INT2-B
T2=30%
INT1-B
T1=60%
INT3-A
T3=10%
INT2-A
T2=30%
INT1-A
T1=60%
TX-B
TX-A
RST
SHS
SHR
t

FIG. 7

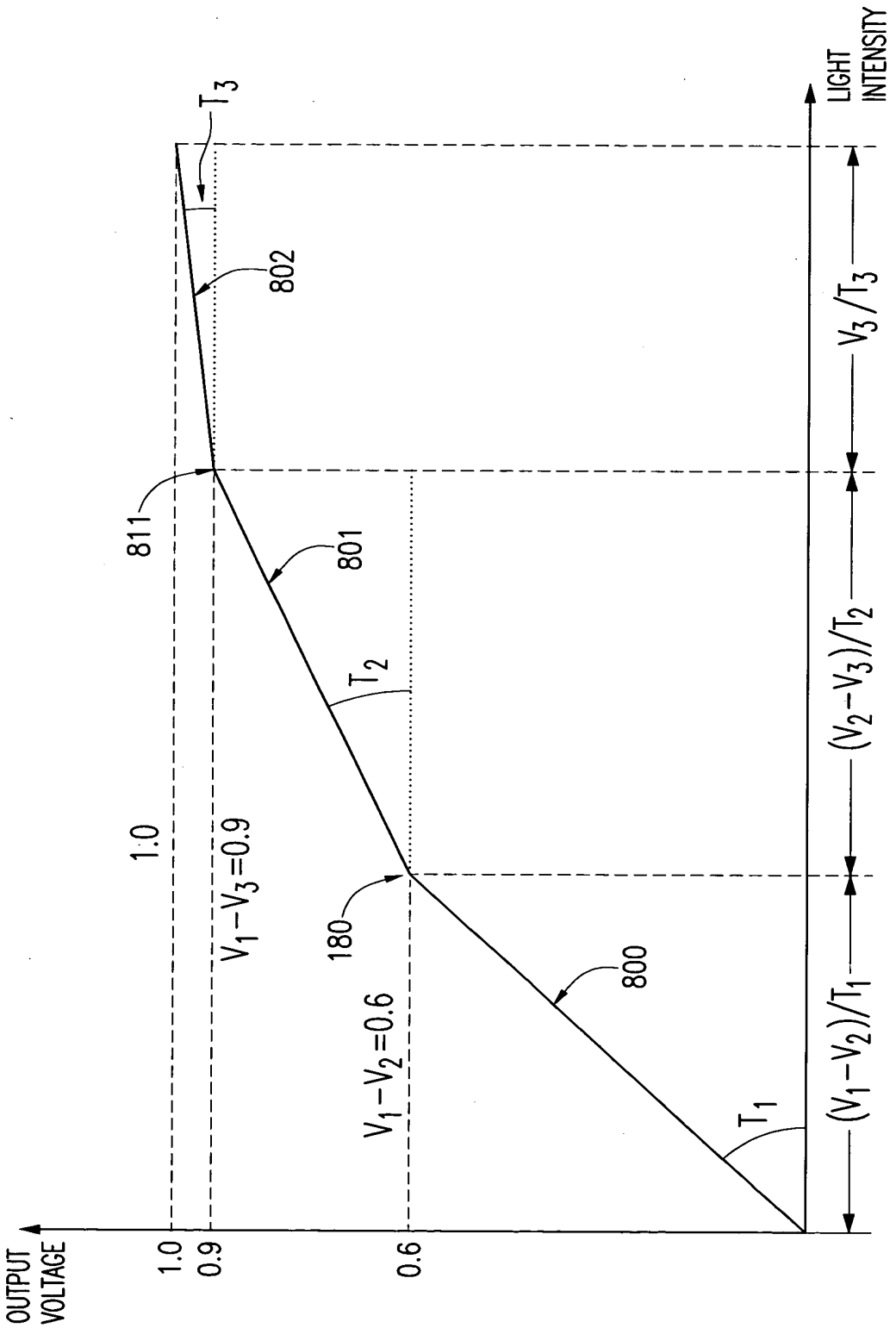
LIGHT INTENSITY
OUTPUT VOLTAGE
1.0
0.9
0.6
T_3
802
811
801
T_2
180
800
T_1
$V_1-V_3=0.9$
$V_1-V_2=0.6$
V_3/T_3
$(V_2-V_3)/T_2$
$(V_1-V_2)/T_1$

FIG. 8

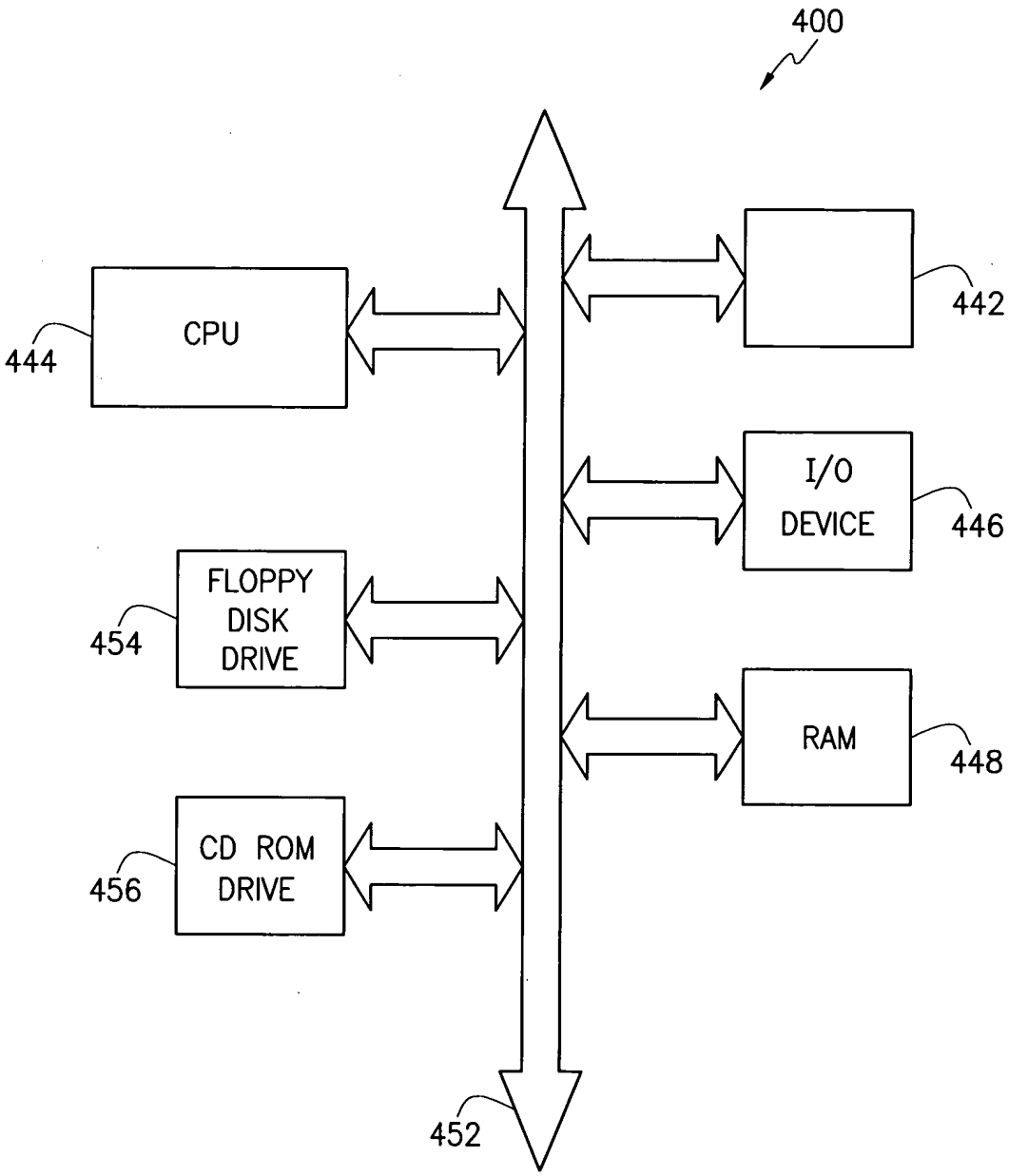
400
CPU
444
442
I/O
DEVICE
446
FLOPPY
DISK
DRIVE
454
RAM
448
CD ROM
DRIVE
456
452

FIG. 9